DOCUMENT RESUME

ED 331 377 HE 024 433

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TITLE Faculty Evaluation and Reward Procedures: Views from Education Administrators.
SPONS AGENCY Akron Univ., Ohio. Coll. of Education.
PUB DATE Apr 91
NOTE 47p.; Paper presented at the Annual Meeting of the American Educational Research Association (Chicago, IL, April 3-7, 1991).
PUB TYPE Reports - Research/Technical (143) -- Speeches/Conference Papers (150) -- Tests/Evaluation Instruments (160)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS *Administrator Attitudes; College Faculty; Decision Making; *Faculty Evaluation; Faculty Publishing; Higher Education; Merit Rating; *Motivation; Professional Recognition; Reputation; *Rewards; *Schools of Education; Teacher Behavior; Teacher Promotion; *Tenure

ABSTRACT

The heads of the education divisions of 245 colleges and universities were surveyed regarding their opinions about faculty evaluation and reward procedures. Findings indicated that tenure received significantly more attention from decision-making bodies in the colleges than merit pay. Tenure was also viewed as having a greater effect on faculty behavior than merit pay, contract renewal, promotion, internal satisfaction, and desire for a reputation. Education administrators at top universities and large universities viewed desire for reputation more motivating than did other education administrators. The department chairs who responded believed that internal satisfaction was more of a motivating factor than did the deans. The deans rated merit pay, contract renewal, promotion, and tenure higher as motivators than did the department heads. Although evaluations of teaching were considered the most important for contract renewal, article and book publication was the most important considerations in merit pay, promotion, and tenure. A factor analysis grouped variables into three factors: teaching, service, and publication. Grant activity was grouped with publications, and paper presentations were grouped with service. Institutions with education administrators emphasizing publication had more resources. Appendices include the survey questionnaire, a list of participating colleges and universities, and a copy of the Ball State Educational Psychology Department merit pay policy. Contains 19 references. (Author/GLR)

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Faculty Evaluation and Reward Procedures: Views from Education Administrators

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April, 1991

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HE024133

Running Head: FACULTY EVALUATION

A paper presented at the annual meeting of the American Educational Research Association, Chicago, IL

This study was funded through a grant from the College of Education, The University of Akron

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Abstract

The heads of education divisions of 245 colleges and universities were surveyed regarding their opinions about faculty evaluation and reward procedures. Tenure received significantly more attention from decision making bodies in the colleges and merit pay received significantly less. Tenure was also viewed as having a greater effect on faculty behavior than merit pay, contract renewal, promotion, internal satisfaction, and desire for a reputation. Education administrators at top universities and larger universities viewed desire for reputation more motivating than did other education administrators. The department chairs which responded believed that internal satisfaction was more of a motivating factor than did the deans. The deans rated merit pay, contract renewal, promotion, and tenure higher as motivators than did the department heads. Although evaluations of teaching were considered the most important for contract renewal, article and book publication were the most important considerations in merit pay, promotion, and tenure. A factor analysis grouped variables into three factors: teaching, service, and publication. Grant activity was grouped with publications and paper presentations were grouped with service. Institutions with education administrators emphasizing publication had more resources.

Faculty Evaluation and Reward Procedures: Views from Education Administrators

Whether it is "publish or perish" or teaching versus research the issue of college faculty evaluation is a concern to every faculty member as well as department heads and deans. Questions arise concerning the nature of the evaluation and how important specific criteria are to the decisions made by those involved in the process. College deans have expressed their frustration and dissatisfaction over their faculty evaluation models (Seldin, 1989). Professors at all levels regard teaching as their central task (Blai, 1982; Finkelstein, 1984; Fox, 1985). However, institution reward systems tend to be based primarily on research and publication, a condition that has been referred to as "institutional schizophrenia" (Peters & Mayfield, 1982). Although college faculty have indicated a preference for a stronger teaching emphasis in faculty evaluation, the trend toward research domination continues (Blai, 1982; Soderberg, 1985).

Faculty evaluation of performance serves as the basis for a number of reward procedures in higher education. For new faculty the simple privilege of being able to return to the institution where they have worked for a year or two rests on some form of evaluation. The privilege of staying at an institution indefinitely through tenure requires more evaluation. Promotion in rank from assistant to full professor requires additional

considerations. In addition to these evaluation concerns, merit pay has been introduced in a number of colleges and universities.

Central to the idea of evaluation is the notion that comparisons can be made of faculty to a criteria or faculty members to other faculty members. Griffith and Neugarten (1984) questioned the ability and appropriateness of pay for performance evaluation approaches in higher education. They wondered how good performance would be identified and measured, and against what standards. McKeachie (1982) also questioned the appropriateness of extrinsic rewards for college faculty, citing diminished internal satisfaction and increased competition which could lead to motivation problems.

Evaluation of college faculty has taken a number of forms. Evaluations of teaching have been conducted by students, colleagues, administrators, and even the faculty members themselves. Student evaluations have been found to provide valuable information about the quality of teaching that correlate with other measures of teaching effectiveness (Miller, 1988) Colleagues have the benefit of a shared perspective in their evaluations, and professors prefer colleague evaluations to administrator evaluations 3 to 1 (Dornbusch, 1979). Self evaluations of teaching have not correlated well with other measures of teaching effectiveness (Moses, 1986), and have received very mixed reviews from deans (Seldin, 1989). Evaluations of research productivity have had difficulty related to quality. Although it is easy to add up the number of

publications a faculty member has, not all publications are equal. In some cases colleagues have been used to rate the quality of journals in a particular area (Johnson & Tuckman, 1985). Service is not easy to judge, because service on one committee or task may require a great deal more time and effort than service on another committee.

The non-tenured faculty members must divide their professional time among activities related to research, teaching, and service, including such activities as developing manuscripts for publication, writing proposals for extramural funding, conceptualizing a program of research, formulating new courses, documenting teaching effectiveness, and serving of various college committees (Adams, 1989). Deans and department heads strive to find ways to measure and evaluate those activities. It is with this background in mind that this study sought to identify the importance of various variables to faculty evaluation decisions and how effective different rewards were in motivating faculty behavior.

The area of "education" was chosen because of its mixture of interest in teaching and increasing concern with research. The leaders of the education departments were chosen as subjects because they are in a position to make decisions concerning faculty rewards. Often the criteria for those decisions is not clear. By identifying the strength of various variables and factors across institutions it was hoped that insight into the decision making could be gleaned. The following questions were

addressed by this study:

1. Who is involved in the decision making processes?
2. How important are various variables and factors in the decision making processes?
3. Is there a clear breakdown of variables considered in faculty evaluation decisions among the constructs of research, service, and teaching?
4. How do the constructs and individual variables compare across various institutions?
5. What is the perceived relative strength of merit pay, contract renewal, tenure, and promotion along with desire for a reputation and internal satisfaction in motivating faculty behavior?
7. Is there a difference between the responses of education deans and department heads?

Methods

Education administrators received questionnaires regarding the importance of various criteria for faculty status decisions.

Subjects and instrument

After a pilot testing of the questionnaire on the "New Deans" group at the 1990 annual meeting of the American

Association for Colleges of Teacher Education, revisions were made and the questionnaire (see Appendix A) was sent to 350 colleges and universities in the United States. Approximately 175 of the institutions were chosen because of their appearance on a list of top colleges (Sheler, Toch, Morse, Heupler, & Linnon, 1989) their involvement in presentations at the American Educational Research Association (AERA) (Wildman, Fletcher, & Prentiss, 1988), or their membership in the Holmes Group. These institutions were matched with 150 similar colleges and universities and an additional 25 institutions were selected at random. Attempts were made to match "top universities," AERA involved, and Holmes Group institutions with other colleges on the basis of region, undergraduate and graduate enrollment, tuition, setting, library holdings, and date founded. Of the 350 questionnaires mailed, 245 (70 percent) usable questionnaires were returned (see Appendix B).

The education administrators were asked to indicate who was involved in various faculty status decisions and using a Likert scale they indicated their perceptions of the importance of a list of 17 variables for consideration in faculty evaluation. They were also asked to indicate how effective merit pay, contract renewal, tenure, promotion, desire for reputation, and internal satisfaction or rewards were in motivating faculty behavior.

Procedure

Who is involved? The educational administrators were asked to indicate whether each of the following were involved in decisions concerning merit pay, contract renewal, tenure, and promotion: (1) Department faculty committee, (2) Department head or chair, (3) College faculty committee, (4) Education dean, (5) Provost, and (6) College president. Due to some of the institutions not having merit pay or not responding in all areas, percents were used in each cell based on the maximum possible responding in each area. Chi-squared procedures were used to determine significant involvement by each decision making body and to test which decisions had the most involvement.

Variables and factors in the decision making processes. The means and standard deviations were calculated for all of the variables within each area of merit pay, contract renewal, tenure, and promotion. A factor analysis of all of the variables was conducted to determine their relationship across and within faculty reward areas. A scree plot of eigen values was generated to determine the number of distinct factors. A varimax rotation was used on the final analysis. Scores were obtained by obtaining the mean of all salient items within the factor. T-tests were used to compare variables and factors.

Comparisons among institutions. The following institutional characteristics were compared with individual variables (eg.

student rating of teaching as a variable considered for promotion) and the three factors: (1) institutions represented at the 1988 AERA annual meeting (Wildman, Fletcher, & Prentiss, 1988), (2) membership in the Holmes Group of universities, (3) listed by US News and World Report (1989) as a top university in general or in the specific areas of amount of resources, retainment of students, quality of faculty, and selectivity of students, (4) student enrollment, (5) mean SAT scores, (6) tuition, (7) states and countries represented by the students, (8) percentage of minority enrollment (Black and Asian), (9) masters and doctorate degrees granted in education, (10) size of library (number of volumes), (11) size of faculty, (12) percent of faculty with terminal degrees (usually doctorates), (13) development money available, and (14) percent of faculty on sabbatical. This information was obtained or calculated from the 1990 version of Peterson's Guide to Four Year Colleges and American Universities and Colleges. Correlations were generated with two-tailed tests of significance.

What motivates faculty behavior? Education administrators were asked to indicate on a Likert-type scale from 1 to 7 how much each of the following affected faculty behavior: (1) merit pay, (2) contract renewal, (3) tenure, (4) promotion in rank, (5) desire for reputation, (6) internal satisfaction. T tests determined significant differences among the variables.

Deans versus department heads. Although the questionnaires were addressed to the dean of education, some institutions, mostly smaller colleges, did not have education deans. Instead department heads or some administrative equivalent was in place and completed the questionnaire. Although some confounding variables may exist distinguishing the education deans from the department heads, these two groups were tested to determine differences related to the evaluation variables and views concerning faculty motivation.

Results

Some additional general information was received from the questionnaires. Of the institutions responding to the survey the average in-class teaching load was 9.64 hours with a range of 2 to 24 hours. Sixty-five percent of the institutions indicated that faculty members were asked to provide their professional goals prior to status decisions. Decisions concerning faculty members tended to be based relatively equally on completion of personal professional goals and meeting relatively standard criterion.

Who is involved?

The Chi-squared analyses on who was involved in faculty evaluation and reward decisions (see Table 1) suggested that

education deans and department heads were the most actively involved ($p < .001$). Faculty committees were less likely to be involved in the decision making ($p < .01$). Faculty committees were more likely to be involved in tenure and promotion decisions than in merit pay or contract renewal decisions.

Tenure received attention from more decision making bodies than merit pay, contract renewal, or promotion ($p < .05$) Merit pay received attention from considerably fewer decision makers ($p < .01$).

Insert Table 1

about here

Variables and factors in the decision making processes

The order of importance of the variables was somewhat different from one faculty reward area to another (see Tables 2-5). Although the order varied slightly, for three of the four areas the three top variables were refereed journal article, book publication, and student rating of teaching. For contract renewal, ratings of teaching by students, administrators, and colleagues pushed refereed journal article down to fifth place.

Insert Tables 2-5

about here

Interpretation of a scree plot suggested a three factor solution for all of the variables from all of the areas (see Figure 1). The factor structures were similar to the concepts of research, service, and teaching which are often mentioned as faculty evaluation areas. However, a more appropriate description of the three constructs might be publication, service, and teaching (see Table 6 and 7). The first factor consisted of service on college committees, professional consulting, as well as serving as an officer in a professional organization. However, the factor also included paper presentations which often are a result of research. The second factor contained book and chapter publication as well as refereed articles and grant activity. The third factor was primarily a teaching construct with student, colleague, and administrator evaluation of teaching loading of the factor. Regardless of the area (merit pay, tenure, etc.) the variables loaded together and correlations of variables across areas ranged from .59 to .94 ($p < .001$).

Insert Figure 1

and Tables 6 & 7

about here

Comparisons among institutions

The comparisons among institutional characteristics and the service, publish, and teaching factors yielded some interesting, but not surprising results (see Table 8). Education deans from institutions active in AERA and those that were members of the Holmes Group rated the items composing the publication factor higher. There were no significant relationships between any of the factors and the institutions identified as top institutions in general or related to resources, retainment, and selectivity. However, the teaching factor was rated higher by administrators at institutions that were identified as having high quality faculty. Institutions with larger student enrollments and those institutions with students with higher SAT scores tended to emphasize publication. Institutions that had more states and countries represented in their student bodies also emphasized publication more. Although there was no relationship between factor emphasis and black enrollment, Asian students seemed to be attracted to institutions with publication emphasis and away from those emphasizing service and teaching in the education faculty. There was a relationship between the number of masters degrees in education granted and the education administrator's emphasis on publication. A relationship also existed between the number of doctorates in education granted and emphasis on teaching. However, it was a negative relationship. Education administrators emphasizing publication had larger libraries, larger faculties, more development money, and more sabbaticals

granted. There was a negative relationship between percent of faculty with terminal degrees and emphasis on service by education deans. There was no relationship between tuition and any of the factors.

Insert Table 8

about here

What motivates faculty behavior?

Tenure was viewed as having a greater effect on faculty behavior than the other variables (see Table 9). Promotion in rank and internal satisfaction/rewards were deemed more effective than contract renewal, desire for reputation, and merit pay. Merit pay was considered significantly less effective than the other variables in affecting faculty behavior.

Insert Table 9

about here

There were some relationships identified among institutional characteristics and the views of their education administrators toward faculty motivation. Education administrators at the top institutions believed that faculty was less motivated by merit

pay and more motivated to obtain a desireable reputation ($p < .01$). Desire for a reputation was also deemed more important by education administrators at Holmes Group universities, those active in AERA presentations, institutions with larger enrollment, higher tuition, more states represented by the student body, larger libraries, more faculty, more masters and doctorate degrees granted, and more developmental monies, and those granting more sabbaticals ($p < .001$).

Deans versus department heads

Of the 245 questionnaires 117 were completed by education deans, 59 were completed by department heads, and 11 were completed by a faculty member, an assistant dean, or another administrator. The remaining 58 did not fill in the line indicating the position of the person completing the questionnaire. Although it may be assumed that these were completed by education deans, because that was who the questionnaire was addressed to, they were not included in this comparison. The education deans were much more optimistic concerning the effectiveness of institutional rewards in affecting faculty behavior (see Table 10). Deans rated merit pay, contract renewal, tenure, and promotion as having a greater effect than did the department heads. There was no significant difference between deans and department heads concerning the effectiveness of reputation and internal satisfaction in

motivating faculty. It should be noted that internal satisfaction was the only motivator that department heads rated higher than deans, and it was the department heads highest rated variable.

Education deans rated all three criteria factors higher than the department heads (see Table 10). They rated the service factor and the publishing factor significantly higher than did the department heads.

Insert Table 10

about here

Discussion

Tenure versus merit pay

Tenure is alive and well and living in education departments. Tenure provides security that money can't buy. The importance of tenure was demonstrated by the number of decision makers involved in tenure decisions versus other faculty evaluation areas, such as merit pay. Tenure was the highest rated variable affecting faculty behavior, receiving a mean of 6.2 on a 7 point scale. Merit pay, on the other hand, had the fewest decision makers and the lowest ratings concerning effect on faculty behavior. McKeachie (1982) has warned against the

dangers of emphasizing extrinsic rewards such as merit pay, and the top universities seemed to agree. Although extrinsic rewards may be necessary in higher education, they do not seem to be sufficient (Plucker, 1988), and they seem to be unrelated to productivity (Johnson & Tuckman, 1985).

Teaching pays the rent, but publishing pays the mortgage

For the short term decision of year-to-year contract renewal, educational administrators turn to evaluations of teaching ability. However, publication of books or articles held the top two spots in decisions concerning tenure, promotion, and merit pay. It is also interesting to note that in two out of the four faculty reward areas, a refereed article was rated as more important (although not significantly different) than the publication of a book. Faculty members might keep in mind that their AERA paper presentation may be viewed by educational administrators as more of a service activity than a research or publication activity.

The publishers have it

At institutions where the education administrators view publishing as more important there seems to be a great deal more of other things as well: More AERA presentations, more students, more diversity in the students, more masters degrees granted, more books in the library, more faculty members, more development money, and more sabbaticals granted. Although it is likely that

the faculty at these institutions have more demands and more stress, they may also have more resources.

The system is the solution

Education deans seem to put more faith in institutional rewards than department heads. The deans rated merit pay, contract renewal, tenure, and promotion significantly higher as motivators than did the department heads. Although this comparison is likely to have been confounded by a number of variables related to the type of institution, this support for external rewards could be a subject of concern for faculty motivation as McKeachie (1982) has suggested.

Conclusion

Faculty evaluation has been a part of the institutional policy, but never before has it carried the "make or break intensity" that it does today (Seldin, 1989). Faculty members have a limited amount of time to spend on all of their activities. They must make time management decisions that will impact them financially and professionally. Education administrators are often in a position to reward or not reward certain behaviors and accomplishments. Their decisions impact the motivation of their faculty and the accomplishments of their institution. An awareness of the rules by all the players will help everyone win.

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Author Notes

Appendix C contains the merit pay policy document for the Department of Educational Psychology at Ball State University. The Department grants zero, one, or two shares of merit pay based on accumulation of points. The system was developed by a committee within the department and point values are considered flexible depending upon the needs of the department and college. This merit pay policy was developed to minimalize faculty relations problems and reduce subjective evaluations of quality. The document is presented here because in the author's view it has accomplished those goals to a great extent.

Table 1

Chi-square analysis of decision making bodies involved with merit pay, contract renewal, tenure, and promotion decisions.

	Merit Pay	Contract Renewal	Tenure	Promo-tion	Total	X^2
Department Com.	34	47	78	73	234	12.32**
Department Head	92	92	92	89	367	17.87***
College Committee	23	35	89	86	232	13.07**
Dean	100	100	100	100	400	38.05***
Provost	55	61	72	69	256	4.91
President	50	61	85	80	276	1.10
Total	353	398	517	498	1765	
X^2	17.75**	4.33	12.88*	1.34		

Note. * = $p < .05$, ** = $p < .01$, *** = $p < .001$

Table 2

Means, standard deviations, and number indicating each variable as applicable for rated variables for merit pay

Variable	n	Mean	SD
Book publication	208	3.47	.79
Refereed journal article	211	3.36	.84
Student rating of teaching	211	3.16	.82
Grant funded activity	210	3.08	.85
Administrator rating of teaching	174	3.03	.94
Book chapter	204	3.02	.82
Colleague rating of teaching	175	2.91	.91
Paper presentation (national)	213	2.88	.81
Officer (national organization)	211	2.72	.86
College committee service	213	2.62	.87
Non-refereed journal article	208	2.53	.75
Paper presentation (regional)	212	2.38	.84
Officer (regional organization)	212	2.26	.83
Student/achievement/performance	158	2.21	.96
Local/community presentation	210	1.97	.82
Professional consultation	205	1.94	.79
Self rating of teaching	186	1.94	1.00
Other	14	3.07	.92

Note. N = 213.
Space between variables indicates a significant difference between adjacent variables as determined by one-tailed t-tests $p < .05$.

Table 3

Means, standard deviations, and number indicating each variable as applicable for rated variables for contract renewal

Variable	n	Mean	SD
Student rating of teaching	240	3.26	.77
Book publication	231	3.15	1.01
Administrator rating of teaching	203	3.07	.96
Colleague rating of teaching	204	3.02	.88
Refereed journal article	236	3.01	1.00
Book chapter	228	2.77	.93
Grant funded activity	229	2.75	.98
Paper presentation (national)	234	2.68	.85
College committee service	237	2.59	.87
Officer (national organization)	231	2.49	.90
Non-refereed journal article	233	2.34	.78
Paper presentation (regional)	234	2.31	.80
Student/achievement/performance	182	2.29	.97
Officer (regional organization)	232	2.14	.81
Self rating of teaching	207	2.02	1.03
Local/community presentation	233	1.93	.81
Professional consultation	227	1.93	.80
Other	15	2.87	.92

Note. N = 245.
Space between variables indicates a significant difference between adjacent variables as determined by one-tailed t-tests $p < .05$.

Table 4

Means, standard deviations, and number indicating each variable as applicable for rated variables for tenure

Variable	n	Mean	SD
Refereed journal article	245	3.48	.83
Book publication	242	3.40	.90
Student rating of teaching	245	3.32	.79
Colleague rating of teaching	208	3.15	.86
Administrator rating of teaching	206	3.12	.94
Book chapter	239	3.03	.88
Paper presentation (national)	242	2.91	.86
Grant funded activity	241	2.91	.90
College committee service	244	2.65	.90
Officer (national organization)	243	2.62	.88
Non-refereed journal article	242	2.48	.81
Paper presentation (regional)	245	2.44	.84
Student/achievement/performance	189	2.30	.98
Officer (regional organization)	242	2.26	.81
Self rating of teaching	212	2.01	1.02
Local/community presentation	242	1.98	.84
Professional consultation	238	1.97	.80
Other	14	3.29	.83

Note. N = 245.
Space between variables indicates a significant difference between adjacent variables as determined by one-tailed t-tests $p < .05$.

Table 5

Means, standard deviations, and number indicating each variable as applicable for rated variables for promotion

Variable	n	Mean	SD
Refereed journal article	245	3.59	.70
Book publication	245	3.49	.83
Student rating of teaching	245	3.31	.79
Colleague rating of teaching	212	3.14	.89
Administrator rating of teaching	210	3.13	.93
Book chapter	241	3.12	.83
Paper presentation (national)	245	2.98	.84
Grant funded activity	245	2.98	.90
Officer (national organization)	245	2.68	.99
College committee service	246	2.67	.91
Non-refereed journal article	244	2.58	.83
Paper presentation (regional)	245	2.51	.84
Student/achievement/performance	190	2.33	1.01
Officer (regional organization)	245	2.30	.80
Self rating of teaching	214	2.04	1.02
Professional consultation	242	2.02	.81
Local/community presentation	245	2.01	.87
Other	13	3.15	.69

Note. N = 245.
Space between variables indicates a significant difference between adjacent variables as determined by one-tailed t-tests $p < .05$.

Table 6

Factor analysis with varimax rotation of all variables

Variables	Factors 1	2	3
National paper pres. (merit pay)	.52		
National paper pres. (contract)	.52	.43	
National paper pres. (tenure)	.60		
National paper pres. (promotion)	.61		
Regional paper pres. (merit pay)	.70		
Regional paper pres. (contract)	.76		
Regional paper pres. (tenure)	.79		
Regional paper pres. (promotion)	.79		
Local presentation (merit pay)	.70		
Local presentation (contract)	.79		
Local presentation (tenure)	.77		
Local presentation (promotion)	.78		
Professional consulting (merit pay)	.69		
Professional consulting (contract)	.76		
Professional consulting (tenure)	.75		
Professional consulting (promotion)	.73		
National officer (merit pay)	.52		
National officer (contract)	.49		
National officer (tenure)	.51	.45	
National officer (promotion)	.52	.44	
Regional officer (merit pay)	.70		
Regional officer (contract)	.66		
Regional officer (tenure)	.71		
Regional officer (promotion)	.72		
College committee (merit pay)	.48		
College committee (contract)	.54		
College committee (tenure)	.52		.46
College committee (promotion)	.51		.46
Self ratings of teaching (merit pay)	.60		
Self ratings of teaching (contract)	.52		
Self ratings of teaching (tenure)	.53		.42
Self ratings of teaching (promotion)	.53		.41

Table 6 (continued)

Variables	Factors 1	2	3
Book chapter (merit pay)		.71	
Book chapter (contract)		.73	
Book chapter (tenure)		.73	
Book chapter (promotion)		.71	
Book publication (merit pay)		.79	
Book publication (contract)		.77	
Book publication (tenure)		.81	
Book publication (promotion)		.81	
Grant activity (merit pay)		.70	
Grant activity (contract)		.63	
Grant activity (tenure)		.68	
Grant activity (promotion)		.66	
Refereed article (merit pay)		.63	
Refereed article (contract)		.75	
Refereed article (tenure)		.78	
Refereed article (promotion)		.79	
Non-refereed article (merit pay)			.29*
Non-refereed article (contract)			.30*
Non-refereed article (tenure)			.41
Non-refereed article (promotion)			.33*
Student rating of teaching (merit pay)			.57
Student rating of teaching (contract)			.64
Student rating of teaching (tenure)			.63
Student rating of teaching (promotion)			.64
Colleague rating of teaching (merit pay)			.65
Colleague rating of teaching (contract)			.72
Colleague rating of teaching (tenure)			.70
Colleague rating of teaching (promotion)			.68
Administrator rating/teaching (merit pay)			.69
Administrator rating/teaching (contract)			.69
Administrator rating/teaching (tenure)			.73
Administrator rating/teaching (promotion)			.73
Student achievement (merit pay)	.44		.52
Student achievement (contract)	.43		.52
Student achievement (tenure)	.44		.57
Student achievement (promotion)	.43		.54
Variance explained by each factor	15.03	10.81	10.11

Note. Factor weights less than .40 not presented for clarity.
* indicates highest factor weight (less than .40).

Table 7

Means, standard deviations, and number for each factor

Variable	n	Mean	SD
Service factor	208	2.39	.58
Publish factor	215	3.17	.67
Teaching factor	142	2.95	.62

Table 8

Correlations between factors and selected college characteristics

	Service Factor	Publish Factor	Teaching Factor
AERA presentations	-.13	.34**	-.18
Holmes group member	-.12	.34**	.04
Top quality faculty	-.04	.09	.39**
Enrollment	-.14	.43**	-.14
Mean SAT scores	-.30*	.41*	.03
States represented	-.26*	.55**	-.09
Countries represented	-.11	.48**	-.01
Black enrollment	.14	.16	-.08
Asian enrollment	-.40**	.27*	-.36*
Masters granted	-.30*	.43**	-.29
Doctorates granted	-.15	.15	-.44*
Library size	-.26*	.55**	-.09
Faculty size	-.09	.42**	-.18
Faculty with terminal degrees	-.31*	.17	-.06
Development money	-.21	.36*	-.41*
Sabbaticals granted	-.17	.38**	-.44*

Note. * = $p < .05$, ** = $p < .01$.
Significant level based on two-tailed test.
Not all data was available for all institutions.
Variation of n size (61-215) affected significance levels.

Table 9

How much each affects faculty behavior (motivation), Mrans and standard deviations

Variable	n	Mean	SD
Tenure	245	6.20	1.13
Promotion in rank	245	5.75	1.21
Internal satisfaction	245	5.73	1.26
Desire for reputation	245	5.29	1.26
Contract renewal	244	5.29	1.54
Merit pay	226	4.66	1.79

Note. Space between variables indicates a significant difference between adjacent variables as determined by one-tailed t-tests $p < .001$.

Table 10

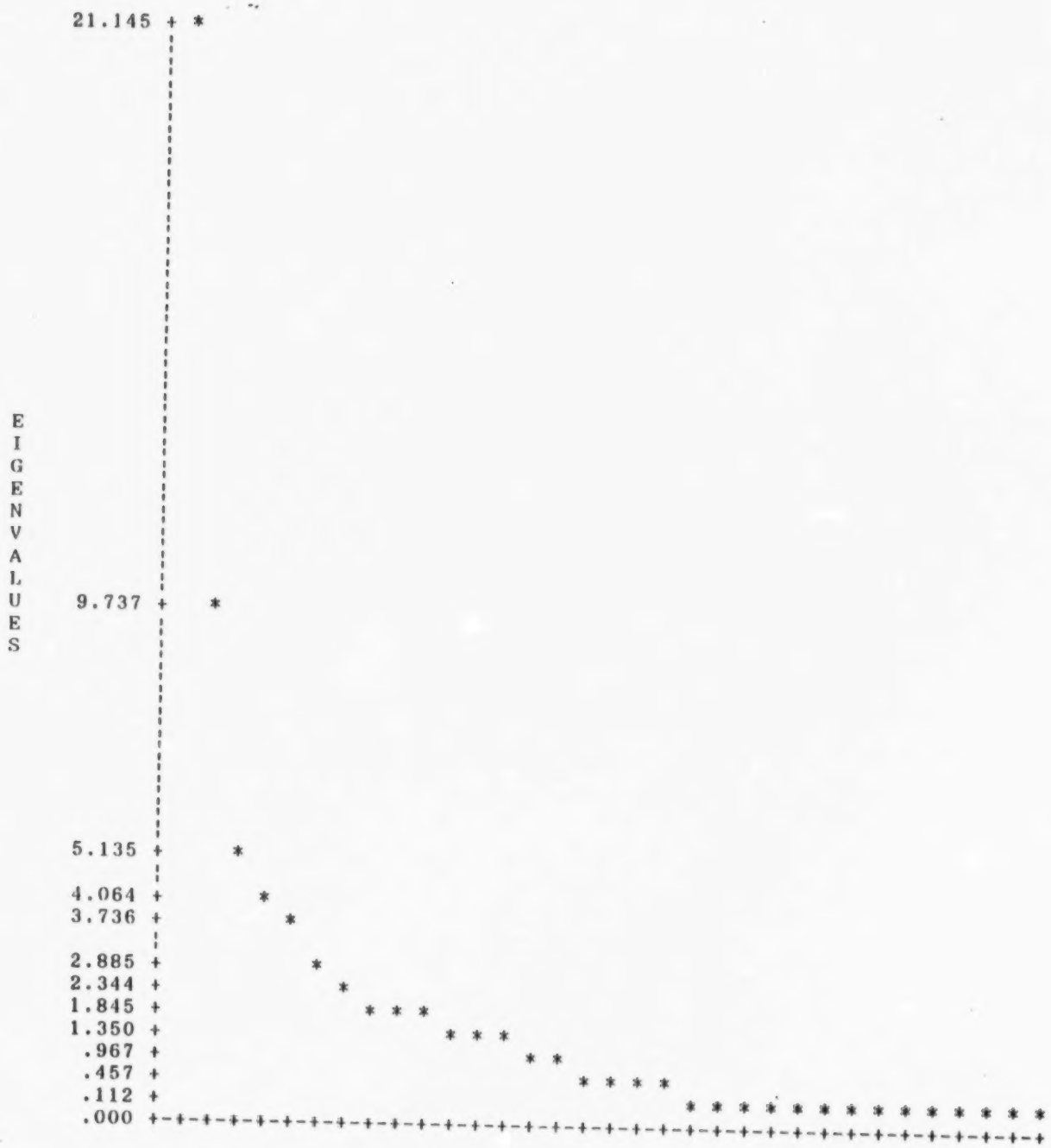
Means, standard deviations, and t-tests on deans and department heads responses to faculty motivation and variable factors

	Deans n=117	Department Heads n=59	
	Mean (SD)	Mean (SD)	t
Motivation			
Merit Pay	5.12 (1.54)	3.82 (2.05)	4.71**
Contract Renewal	5.52 (1.41)	4.98 (1.62)	2.28**
Tenure	6.39 (.81)	5.86 (1.59)	2.86**
Promotion	5.95 (1.02)	5.55 (1.23)	2.09*
Reputation	5.30 (1.37)	5.24 (1.23)	.28
Internal Satisfaction	5.67 (1.29)	5.96 (1.13)	-1.47
Factors			
Service	2.41 (.60)	2.08 (.54)	3.56**
Publishing	3.28 (.56)	2.55 (.81)	6.99**
Teaching	2.97 (.63)	2.78 (.51)	2.01

Note. * = $p < .05$, ** = $p < .01$

Figure Caption

Figure 1. Scree plot of all of evaluation criteria variables across areas of merit pay, contract renewal, tenure, and promotion.


EIGENVALUES
21.145
9.737
5.135
4.064
3.736
2.885
2.344
1.845
1.350
.967
.457
.112
.000

Appendix A

Questionnaire

SURVEY OF EDUCATION FACULTY REWARD SYSTEMS

NAME OF INSTITUTION _____ Your Position _____

Please check each of the following that is involved in decisions concerning faculty merit pay, contract renewal/reappointment, tenure, and promotion in rank.

	MERIT PAY	CONTRACT RENEWAL	TENURE	PROMOTION
Department Faculty Committee	_____	_____	_____	_____
Department Head	_____	_____	_____	_____
College Faculty Committee	_____	_____	_____	_____
Dean	_____	_____	_____	_____
Provost	_____	_____	_____	_____
College/University President	_____	_____	_____	_____
Other _____	_____	_____	_____	_____

Please circle the response indicating <u>your perception</u> of the importance of the following to faculty status decisions concerning merit pay increases, contract renewal/reappointment, tenure, and promotion in rank.

1 = Not Important 2 = Somewhat Important 3 = Important 4 = Very Important NA = Not Applicable

	MERIT PAY	CONTRACT RENEWAL	TENURE	PROMOTION
Refereed journal article	1-2-3-4-NA	1-2-3-4-NA	1-2-3-4-NA	1-2-3-4-NA
Non-refereed article	1-2-3-4-NA	1-2-3-4-NA	1-2-3-4-NA	1-2-3-4-NA
Book chapter	1-2-3-4-NA	1-2-3-4-NA	1-2-3-4-NA	1-2-3-4-NA
Book publication	1-2-3-4-NA	1-2-3-4-NA	1-2-3-4-NA	1-2-3-4-NA
Paper presentation (National)	1-2-3-4-NA	1-2-3-4-NA	1-2-3-4-NA	1-2-3-4-NA
Paper presentation (Regional)	1-2-3-4-NA	1-2-3-4-NA	1-2-3-4-NA	1-2-3-4-NA
Local/Community presentation	1-2-3-4-NA	1-2-3-4-NA	1-2-3-4-NA	1-2-3-4-NA
Grant funded activity	1-2-3-4-NA	1-2-3-4-NA	1-2-3-4-NA	1-2-3-4-NA
Professional consultation	1-2-3-4-NA	1-2-3-4-NA	1-2-3-4-NA	1-2-3-4-NA
Officer (National organization)	1-2-3-4-NA	1-2-3-4-NA	1-2-3-4-NA	1-2-3-4-NA
Officer (Regional organization)	1-2-3-4-NA	1-2-3-4-NA	1-2-3-4-NA	1-2-3-4-NA
College committee service	1-2-3-4-NA	1-2-3-4-NA	1-2-3-4-NA	1-2-3-4-NA
Self rating of teaching	1-2-3-4-NA	1-2-3-4-NA	1-2-3-4-NA	1-2-3-4-NA
Student rating of teaching	1-2-3-4-NA	1-2-3-4-NA	1-2-3-4-NA	1-2-3-4-NA
Colleague rating of teaching	1-2-3-4-NA	1-2-3-4-NA	1-2-3-4-NA	1-2-3-4-NA
Administrator rating of teaching	1-2-3-4-NA	1-2-3-4-NA	1-2-3-4-NA	1-2-3-4-NA
Student/achievement/performance	1-2-3-4-NA	1-2-3-4-NA	1-2-3-4-NA	1-2-3-4-NA
Other _____	1-2-3-4-NA	1-2-3-4-NA	1-2-3-4-NA	1-2-3-4-NA

---

1. Are faculty members asked to provide their professional goals prior to status decisions? Yes No

2. Faculty status decisions are based more on (Circle number based on relative contribution):

   Completion of personal goals - 1 - 2 - 3 - 4 - 5 - 6 - 7 - A relatively standard criteria

3. On the average, how many credit hours per semester do most of your full-time faculty actually spend in the classroom teaching courses? _____

4. For what activities are faculty teaching loads most often reduced _____. By how many hours? _____

5. In your opinion, how much does each of the following effect faculty behavior?

Merit pay	No Effect - 1 - 2 - 3 - 4 - 5 - 6 - 7 - Great Effect NA
Contract renewal	No Effect - 1 - 2 - 3 - 4 - 5 - 6 - 7 - Great Effect NA
Tenure	No Effect - 1 - 2 - 3 - 4 - 5 - 6 - 7 - Great Effect NA
Promotion in rank	No Effect - 1 - 2 - 3 - 4 - 5 - 6 - 7 - Great Effect NA
Desire for reputation	No Effect - 1 - 2 - 3 - 4 - 5 - 6 - 7 - Great Effect NA
Internal satisfaction/rewards	No Effect - 1 - 2 - 3 - 4 - 5 - 6 - 7 - Great Effect NA

Thank you for your input. Please return to Greg Marchant, Educational Foundations, University of Akron, Akron, OH 44325-4208
Please include a stamped addressed envelope if you want to be sent a summary of the results.

Appendix B

Institutions contributing survey data.

Agnes Scott College
Alcorn State University
Alfred University
American University
American International College
Appalachan State University
Arizona State University
Arkansas College
Arkansas State University
Ashland College
Assumption College
Auburn University
Ball State University
Bates College
Baylor University
Beaver College
Bernard College
Boise State University
Bowdoin College
Bradford College
Bradley University
Brandeis University
Brigham Young University
Bucknell University
Butler University
Cal. State University-Chico
Cal. State University-Fuller
California State University-LA
California Baptist College
Cameron University
Catholic University of America
Cedarville College
Central College
Chicago State University
Clarkson University
Cleveland State University
College of William and Mary
Colorado College
Concordia College
Converse College
Creighton University
Dartmouth College
Davidson College
Delaware Valley College
Denison University
DePaul University
Drake University
East Texas State University
Eastern Washington University
Eastern Michigan University
Eastern Kentucky University
Eastern Conn. State University
Eastern Illinois University
Emerson College
Emory University
Evergreen State College
Ferris State University
Fielding Institute
Fitchburg State College
Florida State University
Fordham University
Franklin University
Furman University
Gallaudet University
George Fox College
George Mason University
Georgia Southern College
Georgia State University
Glassboro State College
Gonzaga University
Grambling State University
Grand Valley State University
Greenville College
Grinnell College
Grove City College
Gwynedd-Mercy College
Hardin-Simmons University
Harvard University
Hillsdale College
Hofstra University
Hunter College
Illinois Wesleyan University
Illinois State University
Indiana University-Bloomington
Indiana University-South Bend
Indiana State University
Jacksonville University
James Madison University
John F. Kennedy University
Kansas State University
Kean College
Kent State University

King's College
LaSalle University
Lamar University
Lehigh University
Lewis Clark State College
Linfield College
Loma Linda University
Long Island University
Loyola University of Chicago
Loyola Marymount University
Marietta College
Marshall University
McNeese State University
Memphis State University
Menlo College
Messiah College
Michigan State University
Middlebury College
Millikin University
Minot State University
Mississippi State University
Monmouth College (NJ)
Monmouth College (IL)
Mount Union College
Mount Holyoke College
Mount St. Mary's College
National College of Education
North Central College
Northeastern University
Northeastern State University
Northeastern Ill. University
Northern Arizona University
Ohio Wesleyan University
Ohio State University
Oklahoma State University
Our Lady of the Lake U.
Pacific Union College
Pennsylvania State University
Presbyterian College
Princeton University
Purdue University
Regis College
Rhode Island College
Rider College
Rollins College
Saint Mary's College
San Jose State University
Santa Clara University
Siena College
Simmons College
Smith College
Sonoma State University
South Carolina State College
Southern Oregon State Univ.
Southern Illinois University
Southwestern University
Spalding University
Springfield College
St. Joseph's University
St. Mary's College of Cal.
St. Michael's College
Stanford Universtiy
Susquehana University
Swarthmore College
Syracuse University
Taylor University
Temple University
Texas A & M University
Texas Wesleyan University
Transylvania University
Trinity University
Tufts University
Tulane University
University of Akron
University of Alabama
University of Alaska-Fairbanks
University of Arkansas
Univ. of Arkansas-Little Rock
University of California-LA
University of Chicago
University of Cincinnati
University of Colorado-Boulder
University of Conneticutt
University of Dayton
University of Florida
University of Hartford
University of Idaho
University of Illinois
University of Illinois-Chicago
University of Iowa
University of Kansas
University of Kentucky
University of Louisville
University of Maine
University of Maryland
University of Miami
University of Michigan
Univ. of Missouri-Columbia
Univ. of Missouri-Kansas City
Univ. of Missouri-St. Louis
University of Montana
University of Nevada-Las Vegas
University of New Mexico
University of North Carolina

University of North Colorado
University of North Florida
University of North Dakota
University of North Texas
University of Northern Iowa
University of Oklahoma
University of Oregon
University of Pittsburgh
University of Puget Sound
University of Redlands
University of Rhode Island
University of Richmond
University of San Diego
University of Scranton
University of South Carolina
University of South Dakota
University of Tennessee
University of Texas-Arlington
University of Texas-Austin
University of Texas-El Paso
University of the Ozarks
University of Utah
University of Vermont
University of Virginia
University of Washington
Univ. of Wisconsin-Milwaukee
Univ. of Wisconsin-Parkside
Univ. of Wisconsin-Platteville
University of Wyoming
Utah State University
Vanderbilt (Peabody) Univ.
Villanova University
Virginia Polytechnic Institute
Virginia Commonwealth Univ.
Wake Forest University
Washington State University
Wayne State University
Weber State College
West Virginia University
Western Michigan University
Westminster College
Wichita State University
Wilson College
Winston-Salem State University
Wittenberg University
Worcester Polytechnic
Wright State University
Yale University
Youngstown State University

Appendix C

Ball State University Educational Psychology Department merit pay policy.

Amended by the Department-March 9, 1984
May, 1986
December 12, 1986
February. 1988
December 12, 1988
Reapproved Nov. 29, 1989
Reapproved March 18, 1991

Criterion Referenced Salary Adjustment Plan for the Department of Educational Psychology

A criterion referenced salary adjustment plan is used in order to maximize long term faculty productivity, minimize divisive intra-faculty competition and maximize fairness of administration of the plan.

It is designed to foster performance of professional activities which benefit the EDPSY Department, the Teachers College, Ball State University and their constituencies. It includes two components, a base component and a special merit component.

Base Component

The base component, comprised of the maximum percentage of salary adjustment funds which can be used for this purpose, is awarded for competently performing the professional duties for which the individual is employed and qualifies the faculty member to share in the salary adjustment dollars to be distributed in equal percentages based upon the previous year's salary.

Special Merit Component

Professional activities which are competently performed above and beyond the base component activities are defined as special merit activities.

Points for special merit activities are based on a departmental point schedule. If the resultant total number of points reaches 100 points the faculty member qualifies for special merit level I. If the resultant total number of points reaches or exceeds 200 points the faculty member qualifies for special merit level II.

Special merit level I will receive one share, and special merit level II will receive two shares of the special merit dollars. The dollar value of a share will be determined by dividing the total money available for special merit (the remaining money available for salary adjustment) by the total number of shares awarded.

Implementation

At salary determination time the chairperson will request that each faculty member submit a documented list of professional activities which is to be considered for special merit component eligibility. The chairperson will validate the list, calculate the point total and verify the results with the faculty member.

The salary adjustment plan will be reviewed early each year by the salary committee. The updated and/or refined salary adjustment plan will be approved by majority vote of the regular full time faculty of the Educational Psychology Department. Appeals will be handled in a manner consistent with collegiate and university policy.

Department of Educational Psychology

Special Merit Component categories and Point System

This plan assumes a Base Component for competently performing the professional duties for which load credit is received and qualifies the faculty member to share in the "across the board" part of salary improvement dollars. The plan provides for a tiered Special Merit Component determined on the basis of total number of points accumulated from the categories listed below. Merit salary adjustments will be distributed on the basis of these categories.

		Points
1.	Publish a book, monograph or standardized test by a reputable publisher	100
2.	Contribute a chapter to a published book	25
3.	Publish an article in a refereed journal	
	National/International	50
	State/Regional	25
	Local (University)	10
4.	Publish an article in a non-refereed journal	
	National/International	25
	State/Regional	15
	Local (University)	5
5.	Serve as a member of a doctoral committee	5
6.	Serve as a member of an officially elected or appointed committee, or non senate council	5
7.	Serve as a member of senate or a senate council	5
8.	Write a grant proposal which results in internal (University) funding	10
9.	Write a grant proposal which results in external funding	25
10.	Serve as an officer of a professional organization relating to either psychology or education	
	National/International level	25
	State/Regional level	20
11.	Present research at a recognized professional meeting, conference, or convention	
	National/International	25
	State/Regional	10

12. Present a position paper or invited address at a recognized professional meeting, conference, or convention, or for an established professional group

National/International	20
State/Regional	10

13. Present a workshop at a recognized professional meeting, conference, or convention, or for an established professional group

National/International	20
State/Regional	10

14. Serve as a panel member at a professional meeting, conference, or convention

National/International	10
State/Regional	5

15. Serve as a member of a standing committee of a professional organization

National/International	10
State/Regional	5

16. Attend a workshop or a series of related professional workshops or classes involving a minimum of three hours of instruction — 5

17. With prior approval of department chairperson attend an extended professional workshop involving three (3) quarter hours or equivalent — 10

18. Serve as editor of a professional publication

National/International	50
State/Regional	20

19. Serve on the editorial board (other than editor) of a professional publication

National/International	25
State/Regional	10

20. Serve as a consulting editor of professional publications, review paper proposals for a professional meeting or serve as a reviewer of grant proposals

National/International	10
State/Regional	5

21. Serve as a guest editor (one issue only) of a professional publication

National/International	20
State/Regional	10

22. Meet criteria for excellence in teaching, departmental administration or departmental service

Points per unit	10

23. Receive a merit award within one's discipline from a professional organization

National/International	100
Regional/State/University	50

24. Receive a Danforth, Fulbright, Lilly or like fellowship

    a. Minimum points for the second level of merit will be awarded if the recipient is assigned for one full-time academic year.

    b. One-half of minimum points for second level of merit will be awarded if the recipient is assigned for one semester (full-time)

25. Receive a special assigned leave contributing to the benefit of the department and/or the recipient's professional growth or pursue full time post graduate study retraining activities with prior approval of the department chair.

    a. Minimum points for the first level of merit will be awarded if the faculty member is assigned for one academic year (full-time).

    b. One-half of the minimum points for the first level of merit will be awarded if the faculty member is assigned for one semester (full-time).